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# **BASIC FARM AND PRODUCER DATA TASK FORCE**



## **FINAL REPORT**

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Sherm Winings**

**July 1971**

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## PART I INTRODUCTION

### A THE ASSIGNMENT

The overall ASCS Management Analysis Project (MAP) included a thorough review of all agency processes. As an integral part of this effort, task forces were appointed to study specific functional areas of work. The thrust was to recommend new methods and concepts for the development of a totally new integrated ASCS system maximizing the use of large scale central computer equipment. It was recognized, however, that some of the processes in ASCS would not lend themselves to computer application, therefore, the study was not to be limited to only those items adaptable to computer processing, but to include all activities and indicate improvements where deemed appropriate. All task forces were requested to keep the following objectives in mind at all times.

- 1 Improved farmer and other customer service.
- 2 Improved public relations.
- 3 Improved quality of management information.
- 4 Elimination of duplicated efforts.
- 5 Improved coordination of various operating units.
- 6 Increased speed, accuracy, and economy in the processing of data and maximizing utilization of personnel and equipment.

Specifically, the responsibilities of the Basic Farm and Producer Data Task Force were two-fold in nature. Initially, to contribute towards total ASCS systems development by identifying and defining the areas of the total system that can be described as basic farm and producer data. This data comprises those records that are or could be common to all programs for which county offices have responsibility. Secondly, upon the completion of this identification and definition phase, the task force was given the charge to study in depth the establishment and maintenance of an overall farm and producer data base and to develop and recommend a conceptual system for collecting and structuring the data in a more efficient and usable mode to provide for:

- 1 Better servicing the needs of farmers and other users.

- 2 Contributing to the more effective administration of farm programs.
- 3 Establishing a base for responsive management information system.

## B SCOPE

To thoroughly analyze the overall assignment, the task force was required to prepare a scope to operate within. The following areas of responsibility as proposed by the task force and approved by the Control and Coordination Committee were determined to fall within the scope of duties to be subsequently studied:

- 1 Basic Farm and Producer Data by Tract
- 2 Definition of a Tract
- 3 Definition of a Farm
- 4 Definitions of Cropland, Tractland, and Farmland
- 5 Definitions Relative to People
- 6 Tract and Farm Numbering Systems
- 7 Reconstitution of Farms
- 8 Establishment and Maintenance of Farm and Producer Data
- 9 Preparation and Use of Aerial Photography
- 10 Format, Use, and Maintenance of Address Plates and Imprinter Cards
- 11 Establishment, Use, and Maintenance of Producer Indexes

## C BASIC APPROACH

As predetermined for all task forces to assure a coordinated effort, the entire assignment was structured and completed according to the detailed approach and documentation requirements. An outline of these requirements is included on pages 7 and 8. The complete documentation is contained in Appendix I.

Following the orientation program and briefings for the task force as conducted primarily by the Steering Committee and the Control and Coordination Committee during the week of October 5, 1971, intensive work has continued

in accomplishing the overall assignment. For the most part, the entire task force has worked as a group in addressing the various responsibilities. To the degree possible, members have been required to devote fifty percent or more of their time to the effort. Two-week group sessions have been conducted in Washington since the work began, with field members remaining at their home stations on the alternate two weeks. (The detailed plan of work is included as Task I of the supporting documentation in Appendix 1 to this report.)

#### D TESTING PHASE

Following the completion of the conceptual phase (Task 3) of the overall assignment, it was determined that the proposals as developed should be tested for validity. It was further felt that the testing approach should be directed toward the organizational area of ASCS upon which the greatest impact would be placed, namely States and counties.

Thus, a three-part testing method was approached.

- 1 State and county office visits. Eight members of the task force divided into four teams and visited pre-selected State and county offices. The concepts as developed were sent to the selected offices in advance and then were discussed at length upon the arrival of each team to gain feedback in terms of comments, questions, and additional ideas. Task force members also received valuable insight on the operations as being conducted in remote locations around the nation.
- 2 Kansas City Seminar. Following the above trips, two seminars were held in Kansas City of 2 1/2 day duration each. Sixteen State and county employees from various States were invited to attend each session. All areas were represented. The same discussion approach was used in these seminars as outlined in paragraph 1. Again, the personnel attending were mailed the conceptual package for review prior to the seminars. Much valuable feedback was obtained in these sessions. A scheduled KCDPC tour was also provided for all personnel attending the seminars.
- 3 Questionnaires mailed to workload verification counties. The same conceptual package was mailed to the 160 verification counties across the nation with a pre-designed questionnaire attached. These offices were requested to review the concepts and return written comments and ideas to the task force for further review. Questionnaires were returned by 104 counties.

Following this planned endeavor, the task force reconvened to review all feedback as obtained during the testing phase. The original concepts were altered or revised as deemed necessary prior to the design of the Interim or "ballpark" Report for presentation to the Administrator's office. A copy of this Report is contained in Task IV of the documentation located in Appendix 1.

Upon the acceptance of the Interim Report, the task force addressed the final tasks of the overall assignment and designed the Final Report as contained herein.

## E OTHER DOCUMENTATION

### 1 Appendix I - Approach and Documentation

To insure results are consistent with other task forces and that they can be subsequently used as the heart of a new system, Appendix I details the following general tasks: preparation, definition, compilation, conception, specification, authentication, and planning considerations.

### 2 Appendix II - Compilation Phase

A collection of forms, documents, and considerations accumulated during the compilation task and used as a basis for the conceptual phase of the task force effort.

### 3 Appendix III - ASCS Network Analysis (ANA) Research Project

Complete documentation of a special research project completed by this task force. The project was conducted at the request of the ADP Division in an attempt to analyze the transactions that occur within the State and county environment which relate themselves to remote terminal interaction. The results of this research are being used to determine communication facility requirements for planning purposes.

### 4 Appendix IV - Other Agency Interface

Notes, documents, and other material accumulated during a series of meetings with other agencies to determine needs and to foster an atmosphere of cooperation.

### 5 Appendix V - Field Office Interface

Notes, pictures, and other pertinent data accumulated during the "Testing Phase" (see page 3).

## F TASK FORCE PROFILE

Jim L. Ray, Chairman -- Born and raised on a wheat farm in south-central Kansas, his ASCS career began as a field reporter on a part-time basis while teaching in a rural high school, and then serving as assistant county office manager in Reno County, Kansas. In 1965, he became county office manager in Sedgwick County, Kansas, and served in this capacity until transferring to Washington in 1967. He has worked as a management analyst, employee development officer, Staff Assistant to DASC0, and is presently Leader, Training Resources Staff, OEI Division.

Clifton A. Adams -- Clif left the seed business to join ASCS in 1961 as assistant county office manager in Imperial County, California. In 1964, he was appointed county office manager in Yuma County, Arizona. The transfer to Washington occurred in 1967, and he has worked until recently as a cotton program specialist. Clif's capacity now is Assistant to the Director, Commodity Stabilization Division.

Charles Callis -- Presently serving as a computer systems analyst and designer in the Kansas City Data Processing Center. He is a native of Indiana and joined ASCS in 1961 after retiring from the U.S. Air Force.

Win R. Church -- Once a Western Kansas farmer, he began service with ASCS as a county committeeman in 1958. He became county office manager in Lane County, Kansas in 1961, and transferred to Washington in 1966 as a program specialist in the Farmer Programs Division. He has also worked in this capacity in the former Compliance and Appeals Division, and currently is a Staff Assistant to DASC0.

Amos Dunn -- A native of Sussex County, Virginia, he began his ASCS career there as a compliance reporter in 1954. He became compliance supervisor and then county office manager in Sussex County in 1956. Amos recently received the 1971 Virginia Association of County Office Employees (VASCOE) award for outstanding service to ASCS and agriculture.

M. J. (Jack) Hanley -- Beginning as a compliance reporter and program clerk in Stevens County, Washington in 1958, he later served six years as county office manager in Skagit and Ferry Counties. Presently, Jack is a county office specialist in the Washington State ASCS Office in Spokane. In 1968, he was the winner of a USDA Merit Award for the development of a scanner typewriter attachment.

Larry Heffel -- Growing up on a wheat and grain sorghum farm in Kansas, he joined ASCS in 1963 at the Kansas City Data Processing Center. Larry has eight years experience at the center in computer programming and systems analysis. He will be joining the ADP Division in Washington in August 1971.

Jay B. Longhurst -- From 1957 until 1965, he was county office manager in Rich County, Utah. After two years as a county operations assistant in the Utah State ASCS Office, he transferred to Washington as a training officer and then worked as a management analyst. Jay won a NIPA award scholarship to the University of Washington in 1969, and has been with the ADP Division since 1970 as a management analyst.

Sherman B. Winings -- Sherm was raised on a grain and dairy farm in central Illinois and operated a 240 acre grain farm in Piatt County. He began his USDA career with the Statistical Reporting Service in 1961 and served as an agricultural statistician in field offices in Illinois, Iowa, and Montana. In 1969, he transferred to Washington with SRS, and joined the ADP Division of ASCS in January 1971 and currently works in the sampling and analysis of statistical data and computer systems for such areas.

## G - APPROACH AND DOCUMENTATION

### **TASK 1**

- 1(a) Indoctrination**
- 1(b) Coordination and Assignment**
- 1(c) Project Plan and Schedule**

### **TASK 2 - Definition**

(Description of Environment)

- 2(a) Objectives**
- 2(b) Current Mgt. Problems Which Preclude Responsiveness**
- 2(c) Legislative, Policy/ Other Conflicts Which Impede Effectiveness**
- 2(d) Functional Characteristics Relate to Phase I Chart**
- 2(e) Requirement of Other Organizations Commitment - Supplying Information**
- 2(f) Interface With Other Task Forces**

### **TASK 3 - Compilation**

(Recompiling Phase II and Collecting More Information)

- 3(a) Source Documents**
  - 1 Originating Source
  - 2 Nature of Processing
  - 3 Ultimate Disposition
- 3(b) Redundant Documents**
- 3(c) Output Documents**
  - 1 Purpose
  - 2 Origination
  - 3 Distribution
- 3(d) Operating Reports**
  - 1 Purpose
  - 2 Source
  - 3 Frequency
  - 4 Distribution
- 3(e) Management Reports**
  - 1 Purpose
  - 2 Source
  - 3 Frequency
  - 4 Distribution
- 3(f) Historical Data Requirements to Support Decisions**
  - 1 Nature of Data
  - 2 Utilization
  - 3 Timeliness
  - 4 Period of Retention
  - 5 Frequency of Use
- 3(g) Manual Files Maintained**
  - 1 Content
  - 2 Purpose
  - 3 Location
  - 4 Input Source
  - 5 Size - Volume
  - 6 Sequence
  - 7 Access Requirements
- 3(h) Automated Files Maintained**
  - 1 Content
  - 2 Purpose
  - 3 Location
  - 4 Input Source
  - 5 Size - Volume
  - 6 Sequence
  - 7 Access Requirements
- 3(i) Accounting and Budget System Interface**
  - 1 Nature
  - 2 Frequency
  - 3 Content of Interface Requirements
  - 4 Source
- 3(j) Program System Interface**
  - 1 Nature
  - 2 Frequency
  - 3 Content of Interface Requirement
  - 4 Source
- 3(k) Management and Operating Control**
  - 1 Current Strategy
    - a How is policy control vs. management objectives exercised?
    - b What information is required for what decisions?
    - c How operationally implemented now?

(7)

### **TASK 4 - Conception**

(Develop Applications Which Solve As Many Current Management and Operational Problems As Possible)

- 4(a) Central Data Bank Proposal**
  - 1 Common Data
  - 2 Improved Currency
  - 3 Decrease Turn-Around and Retrieval Time
  - 4 How Can Previously Defined Management and Operating Problems be Solved-Improved Through Use of Central Data Bank?
- 4(b) Management Control Proposal**
  - 1 Refer to Current Documental Problems-Task 2(b), and Strategies of Control Task 3(k)
  - 2 Document Proposed Plan to:
    - a Better fulfill management objectives
    - b Resolve current problems
    - c Enhance current control opportunities
- 4(c) Proposed Systems Overview**
  - 1 Broad Process Chart Showing:
    - a Inputs
    - b Processes
    - c Outputs
    - d Offices Involved
- 4(d) Principle Innovations**
  - 1 Document Major Proposed Changes
    - a Computer
    - b Non-Computer
    - c Legislative
    - d Policy
    - e Organizational
- 4(e) Non-Uniform Processes**
  - 1 Document Narratively
  - 2 Support With Charts, Tables, Graphs, etc., as Applicable to Support Recommended Changes
- 4(f) Summary Data Requirements**
  - 1 Define, Summary and Report Data Requirements
    - a Content
    - b Source Data
    - c Frequency of Potential Use
    - d How Critical?
- 4(g) Management and Operating Reports Proposal**
  - 1 Refer to 4(c) - Define Reports
    - a Content
    - b Frequency
    - c Distribution
    - d Use
  - 2 This Should Be a Consolidation-Improvement of Current System
- 4(h) Time Initiated Functions**
  - 1 Document Expected
    - a Utilization
    - b Data Content
    - c Media
    - d Estimated Volume
- 4(i) Data Initiated Functions**
  - 1 Document Expected
    - a Utilization
    - b Data Content
    - c Media
    - d Estimated Volume
- 4(j) Other Application Interfaces**
  - 1 Establish Proposed Interfaces
    - a Nature
    - b Data Content
    - c Need
    - d Frequency

**TASK 5 - Specification**  
(Detail of New System-Parallels  
Task 3 Plus Additional Data)

**5(a) Source Documents**

- 1 Originating Source
- 2 Nature of Processing
- 3 Ultimate Disposition

**5(b) Redundant Documents**

**5(c) Output Documents**

- 1 Purpose
- 2 Origination
- 3 Distribution

**5(d) Operating Reports**

- 1 Purpose
- 2 Source
- 3 Frequency
- 4 Distribution

**5(e) Management Reports**

- 1 Purpose
- 2 Source
- 3 Frequency
- 4 Distribution

**5(f) Historical Data Requirements to Support Decisions**

- 1 Nature of Data
- 2 Utilization
- 3 Timeliness
- 4 Period of Retention
- 5 Frequency of Use

**5(g) Manual File Specifications**

- 1 Content
- 2 Purpose
- 3 Location
- 4 Input Source
- 5 Size-Volume
- 6 Sequence
- 7 Access Requirements

**5(h) Automated File Specifications**

- 1 Content
- 2 Purpose
- 3 Location
- 4 Input Source
- 5 Size - Volume
- 6 Sequence
- 7 Access Requirements

**5(i) Modularity Specification**

- 1 Identify Critical or Volatile Computerized Calculations - Structure Concept to Facilitate Prompt Implementation of Policy Changes and Controls

**5(j) Processing Specification**

- 1 Narratively Describe Process Flow
- 2 Indicate if Inputs Should Be at KCDPC or at Other Remote Sites Through High Speed Input Devices
- 3 Indicate if Outputs Should Be Printed and Distributed at KCDPC Via High Speed Lines or By Mail to Remote Sites

**5(k) Service Time Specifications**

- 1 Define Service Time for Each Transaction
  - a Acceptable Maximum
  - b Mandatory Maximum
- 2 Processing Cycle, Etc.

**5(l) Processing Flow Charts**

- 1 Document New System
- 2 Detail to Lowest Level of Phase II

**5(m) Processing Volume Estimation**

- 1 Provide System Designers Sufficient Information on
  - a Volume of transactions to be processed in new system
  - b Volume of records in each on-line and master tape file for average and peak conditions

**TASK 6 - Authentication**  
(Justification)

**6(a) Control Opportunities**

- 1 Objective is to Improve Executive and Operating Management Effectiveness. Basic Questions Are:
  - a How have control opportunities been enhanced? By what means?
  - b Is appropriate and timely information available?
  - c Can policy and procedural changes be readily implemented in response to management actions?

**6(b) Override Opportunities**

- 1 Document Means by Which Quality Services Will be Maintained by Override Capability

**6(c) Quality Control**

- 1 How is Consistently High Level of Quality to be Maintained? By What Features?
- 2 What Quality Control Functions Will User be Required to Perform?

**6(d) Other Application Interfaces**

- 1 Review 4(j) and Explain Changes from Current Practice

**6(e) Requirements of Other Organizations**

- 1 Review 4(k) and Explain Changes from Current Practice

**6(f) Information Retrieval Capabilities**

- 1 Timely Access to Special or Unique Combinations of Details Available

**6(g) Decision Simulation**

- 1 Determine Applicability or Potential for Simulation Techniques

**TASK 7 - Planning Considerations**

**7(a) Organizational Impact On:**

- 1 Organizational Structure
- 2 Mission Responsibilities of Each Office
- 3 Workload-Staffing by Organizational Unit
- 4 Preparatory Training Required to Support Implementation

**7(b) Implementation Schedule**

- 1 Determine Best Possible Implementation Time in View of Work Cycle-Slack Period, etc.

**7(c) Application Conversion**

- 1 Advice on Need for Parallel Operation and Other Conversion Needs

**FINAL REPORT TO ADMINISTRATOR**

**A Summary of Proposed Plan**

**B Specific Recommendations Describing Changes Desirable to Accomplish Proposed Plan**

**C Differences in the Proposed System and the Present System, Advantages and Disadvantages of the Changes**

**D Changes in Organizational Responsibilities, Current Regulations, Policies Required**

**E Other Changes Necessary to Precede System Implementation**

PART II  
TASK FORCE RECOMMENDATIONS

A Summary of Major Considerations

- 1 Land and producer data be established and maintained in a centralized computer system on the basis of a tract.
- 2 A tract be defined as a single parcel of land under one ownership located within a county and operated as a farm or a part of a farm.
- 3 Cropland continue to be defined as provided in current regulations. Basically, cropland is land which is being tilled or has been tilled in the past and which is either suitable for crop production or retains its classification under cropland preservation regulations.
- 4 Tractland be defined as all land in a tract.
- 5 Farmland be defined as all land in a farm. (The sum of the tractland in a farm.)
- 6 An operator be defined as the person who is in general control of the farming operations on the farm during the program year. There shall be only one operator per farm.
- 7 An owner be defined as a person (or persons with undivided interest) who has legal ownership of a tract of land.
- 8 A grower be defined as a person who shares in the production of agricultural commodities or proceeds therefrom and who is neither an owner nor an operator.
- 9 A person be defined as an individual, partnership, association, corporation, estate, trust, business enterprise, or other legal entity and, whenever applicable, a State, a political subdivision of a State, or an agency thereof (subject to additional provisions required by payment limitation regulations).
- 10 Tracts be numbered beginning with the number "1" in each county and continuing until all tracts are numbered. A community code or prefix will not be a part of the number. Numbers will not be duplicated.
- 11 A farm number be the same as the headquarters tract number preceded by the letter "F".
- 12 Tract data be combined or divided by the computer when a tract reconstitution is required. There will be two methods of dividing allotments and bases: (a) division as designated by the owner and (b) the cropland ratio method which will be used when agreement cannot be obtained from the owners.

- 13 Farm reconstitutions be made in the computer by simply changing the tract alignment in the farm data set. When tracts are removed from a farm, the allotments and bases will be determined as designated by the owner or by the intrinsic tract method. The intrinsic tract method provides for each tract retaining unchanged all of its current and historical data.
- 14 When a farm reconstitution results in land being removed from or added to agricultural production, sufficient additional data be inputted to provide land summaries by categories according to usage.
- 15 Land and producer data be computerized and stored in three files or "data sets" as follows:
  - a Producer data set (See Part III, page 27 for detail.)
  - b Tract data set (See Part III, page 28 for detail.)
  - c Farm data set (See Part III, page 29 for detail.)
- 16 A non-producer data set be established to provide names and addresses of entities which are not producers. (See Part III, page 31 for suggested detail).
- 17 Land use acreages (to account for the total land in all tracts), livestock numbers, and commodity storage data be obtained each year during the period for certification of program compliance and stored in the tract data set. Land use acreages include crop acreages (planted and harvested), summer fallow, grazing land, woodland, orchards, irrigated crops, etc.
- 18 A report of production by commodity be obtained each year after harvest and stored in the tract data set.
- 19 Items for the producer data set be inputted initially on a document separate from and prior to the input of farm and tract data. A turn-around type document initially prepared by the DPC showing name, address, and ID number could be used. The returned document would contain needed additional data to complete the data set. This information to be stored on tape until the centralized computer system is established.
- 20 Items for the farm and tract data sets be inputted by scannable document after each county office has been provided sufficient "lead" time to account for all agricultural land physically located in the county. A further study should be made to determine the need and feasibility of obtaining non-agricultural acreages to account for the total area of the county.

- 21 Every effort be made to secure aerial photography coverage for all counties in the nation.
- 22 Aerial photography laboratories be authorized to trim, when necessary, bind and prenumber photography enlargements prior to sending to county offices.
- 23 Optimum materials for a uniform system of color delineation and annotation on aerial photography be determined and furnished to counties by photography laboratories.
- 24 Each tract be delineated in a specified color and numbered on photographs. Fields be delineated in a different color and lettered or numbered in sequence within each tract. Field acreages be entered within each field in whole acres and tenths or hundredths.
- 25 Present photo-copy system be continued. Cut-out photography be authorized in counties which justify its use.
- 26 As soon as operationally feasible, the data on the address plate be reduced to the following items:
  - a Name, address, and ZIP code
  - b Producer ID number
  - c Farm number (operator plate only)
- 27 As soon as technologically possible, the address plate and the plastic imprinter card be replaced by either a metal plate or a plastic card which will work satisfactorily for heading up program forms, addressing items for mailing and imprinting sight drafts for scanning.
- 28 A producer index record be prepared by the DPC to be used in county offices as a basic record and as a source for producer, farm, or tract keys to access the system. (See page37 for detail.)
- 29 A tract index record be prepared by the DPC to be used by county offices as a cross-reference to the producer index record. (See page41 for detail.)

## B Summary of Planning Considerations

- 1 The ASCS data base be used as the government-wide source of farm and producer data.
- 2 Counties be provided with a computer prepared producer index card as soon as possible.
- 3 Counties be afforded sufficient "lead time" to adequately establish and maintain tract data in a form which lends itself to program administration and easy reference for input to the automated system.
- 4 Initial input be timed so that the system can compute the succeeding year's allotments and bases.
- 5 Care be exercised in obtaining land use and production reports so that farmers will cooperate willingly.
- 6 Livestock statistics not be obtained from farmers until other land and people functions of the automated system are operating satisfactorily.

C Summary of Other Considerations

- 1 A "Basic Farm and Producer Record" handbook be established without delay.
- 2 The use of sight draft imprinters and preparation of plastic producer cards be discontinued in low-volume counties.
- 3 Signature authorization cards be made available to use on an optional basis with ASCS-211, Power of Attorney.
- 4 A thorough plan for file security be developed for use upon implementation of the ASCS computer system.

## PART III - EXPLANATORY DETAIL

### BASIC FARM AND PRODUCER DATA BY TRACT

#### A Problem

- 1 Presently, agricultural data is maintained in county offices on the basis of a farm. In some counties, tract data is retained on farms which have been reconstituted within the last few years as an aid in future reconstitutions.
- 2 Data maintained on the basis of a farm provides little to satisfy informational needs of this agency or any other agency of government. This results from the fact that:
  - a Farms contain land which may be located in several counties and in more than one State.
  - b Farms are defined differently in agencies of government dependent upon the needs of each agency.
  - c The physical profile of a farm could, and does, change several times in a year.
  - d Farms are constituted solely for the purpose of administering farm programs and not for maintaining pertinent agricultural data.

#### B Proposal

Data be established and maintained in a centralized computer system on the basis of a tract.

#### C Explanation

Data established and maintained on small units as described above could be:

1. Attributed to a definable area of a county, State, or the nation.
- 2 Attributed to a particular farm.
- 3 Attributed to a particular person.
- 4 Summarized to conform to the needs of each agency or entity regardless of whether the data is needed by farms, counties, States, Congressional districts, the nation, or attributed to people.
- 5 Used to simplify the maintenance of contribution data.
- 6 Farms will continue to include out-of-county tracts for administrative purposes.

## DEFINITION OF A TRACT

### A Problem

A tract is currently defined as land to which a specific amount (including zero) of a farm's total allotments and bases can be attributed. This means that a tract could, and does, include land under separate ownership and in widely separated locations. In order to more adequately satisfy informational and administrative needs, data stored by tracts should have a more meaningful relationship to both people and land.

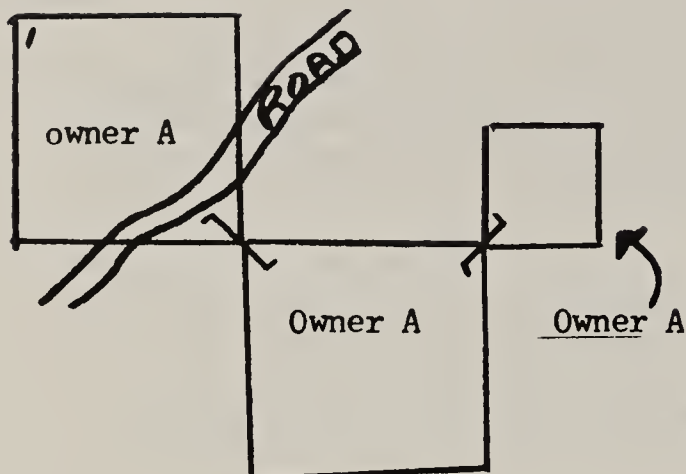
### B Proposal

A tract is a single parcel of land under one ownership located within a county and operated as a farm or a part of a farm.  
EXCEPTION: A tract may be further divided to facilitate program administration or farming operations.

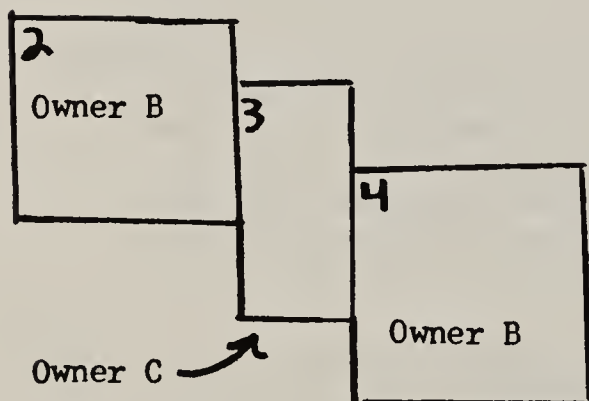
### C Explanation

- 1 A tract as defined above will not be intersected by county boundaries, farm boundaries, or property under other ownership. Data established and maintained on an acreage defined in this manner is data on the smallest increment of land feasibly possible. The acreage is associated with a farm, an owner, and a county. Therefore, it can be summarized to meet statistical and operational needs of this or other agencies.
- 2 When the ownership of two or more tracts is changed and after the change they meet the definition of a tract, it is intended that the data be combined and carried as one tract. The exception as provided in the definition is to permit retention of separate tract data under certain justifiable conditions. One example of a justifiable condition is when an owner purchases an adjoining tract and requests that its identity be maintained because one of the tracts will be sold in the near future. Another example is when the purchaser requests separate tract identity to facilitate the future conveyance of ownership to an heir, etc. To accommodate these types of situations, some flexibility should be maintained even though it could create an additional burden on the system by adding to the amount of data being maintained. Another example is when a highway, river, or other natural or man-made barriers bisect an ownership tract and it is felt that separate tract data would add to the integrity of the informational system.

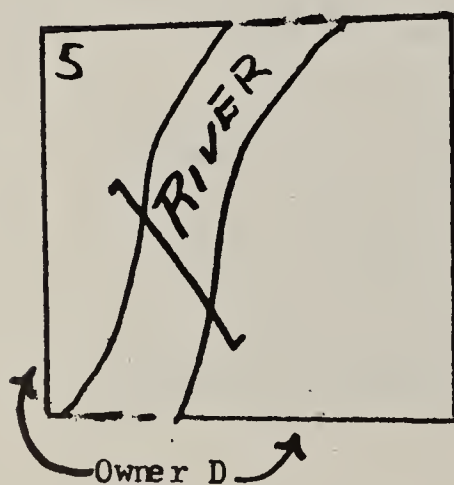
## EXAMPLES OF TRACT CONSTITUTION



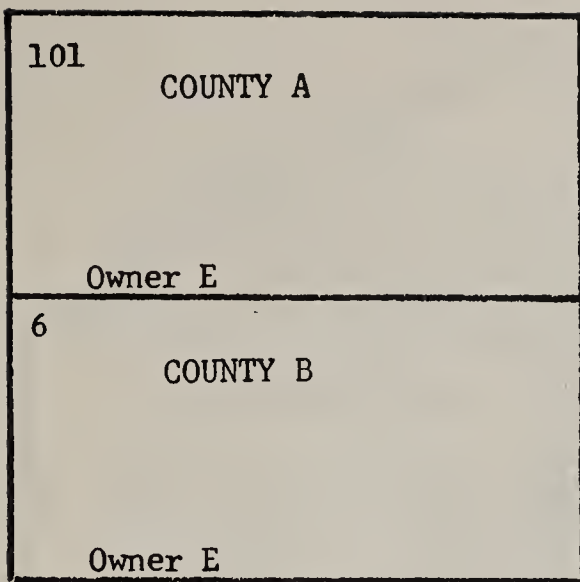
Tract Number 1 is owned by the same person and operated as one farm. Land boundaries connect.



Tracts 2 and 4 are owned by the same person but are divided by Tract 3 which is owned by another person.



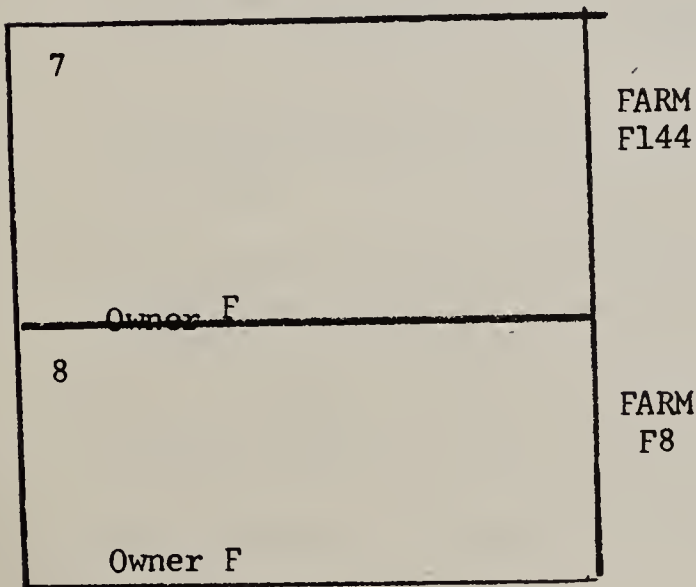
Tract Number 5 is completely intersected by a river. It is owned by the same person and in the same farm.



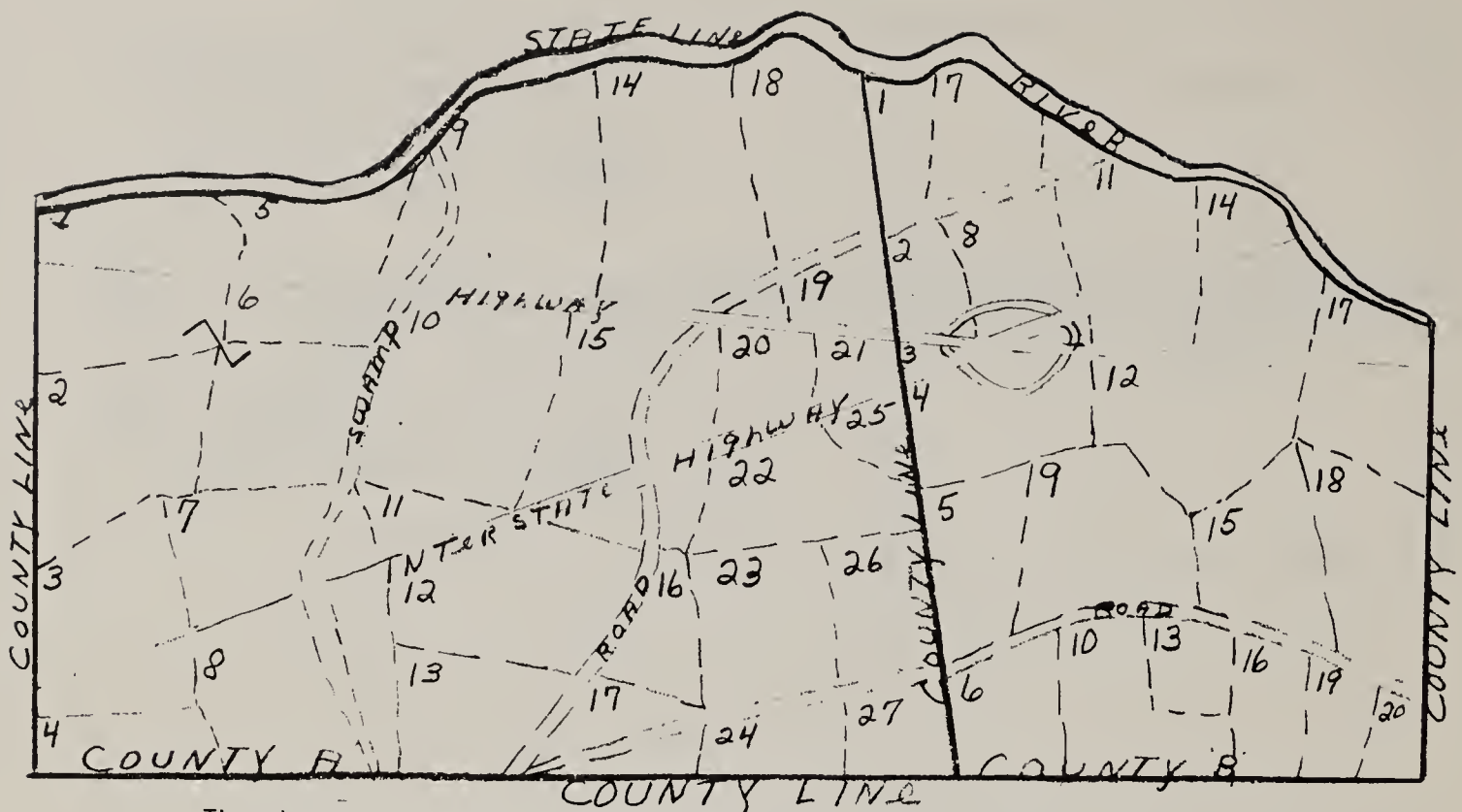
Tracts 101 and 6 are owned by the same person, however, the county line intersects the property. Thus each county office provides a tract number

~~for~~ the land physically located within their county.

County B could administer both tracts as one farm.



Two adjoining tracts are owned by the same person but are under separate operation and, therefore, are constituted as two separate farms. As a result, they are maintained as separate tracts.



The above map shows two counties that are intersected by highways, roads, and swamps. It is not intended that tracts that were originally established tracts, be divided, because they are now intersected by a road, swamp, or other physical dividers. Tracts intersected by county lines will be divided into two tracts even though they remain as one farm to allow the farmer the latitude he needs in his farming operations.

The sketch shows the following:

#### County A

Tract 1 - intersected by a highway and cornered by another parcel of land. - only one tract.

Tract 9 - intersected by a swamp.  
7 and 8

Tract 3-14-15-17 - intersected by roads.

#### County B

Tract 11-14-17-8-2 - intersected by roads

#### A & B

Tracts # 18 in A and 1 in B were initially tract 18 in county "A". Since the county line intersected the parcel of land, it was divided into two separate tracts.

This also true for tract 4 in county B and tract 25 in county "A". This was originally tract 4 in county B.

## DEFINITION OF A FARM

### A Problem

Presently, most farm programs are, by law, administered on the basis of a farm. As a result, farm definitions have been formulated which would provide needed flexibility for the farm operator and would also provide the necessary vehicle for carrying out the intent and purpose of the programs being administered.

### B Proposed definition

A farm shall consist of all tracts operated as a single farming unit among which the farm labor and machinery is, or could be, freely interchanged during the period when normal farming operations are in progress, excluding:

- 1 Tracts not owned by the operator unless the owners agree in writing.
- 2 Field rented portion(s) of a tract leased from another farm for one year or less. (Such land shall remain with the tract of which it is a part.)

### C Explanation

- 1 Farms constituted as defined above will provide the operator with the needed flexibility to shift the planting of allotment and base crops from one tract to another to obtain increased efficiency in farming operations. It is intended that the proper constitution of the farm be dependent entirely upon the operator's ability to operate the tracts as a single farming unit and not upon the definition of a person nor upon the productivity of the land.
- 2 This definition also retains a choice for the owner as to whether his tract or tracts shall be combined with tracts owned by someone else.
- 3 The above definition will provide that State and county committees retain the authority to make final decisions concerning the composition of a farm.



## DEFINITIONS OF CROPLAND, TRACTLAND, AND FARMLAND

### A Problem

- 1 Basically, cropland is now defined as any land being tilled or which has been tilled in the past and which is still suitable for crop production. The present definition also includes land which may never be tilled again but is devoted to good grass pasture, but at the same time does not include an identical acreage which might be devoted to the same type of grass pasture simply because it has never been tilled. This definition is determined necessary for the administration of conservation and production adjustment programs; however, it is not adequate for a responsive informational system in terms of being able to determine acreages available for various types of agricultural production.
- 2 Based on the original proposal that data be established and maintained in a centralized computer system on the basis of a tract, specific definitions of "tractland" and "farmland" are needed for explanatory and informational purposes.

### B Proposal

- 1 The present definition of cropland in 3-PA be retained for administration of on-going conservation and production adjustment programs.
- 2 Tractland is defined as ALL land in a tract.
- 3 Farmland is defined as ALL land in a farm (the sum of all tractland within a farm).
- 4 To subsequently satisfy management informational needs for various cropland requirements, an annual report of total land use by tract will be analyzed within the computer and land categories or classifications established internally. (See proposals within the tract data set in the Establishment and Maintenance of Farm and Producer Data section).

### C Explanation

- 1 In order to administer present programs, the cropland concept now being used will need to be maintained because the conserving base, size of allotments and bases, plus other items of compliance are dependent upon the cropland acreage. However, after an automated data base has been established and an annual report of total land use is obtained on each tract, the system can record and maintain exactly what is being done on each agricultural acre in the nation. By internally massaging this tract data and by the use of various simulation techniques and mathematical methods, the computer can assist to a large degree in projection and planning processes for management.



## DEFINITIONS RELATIVE TO PEOPLE

### A Problem

- 1 By law, payment limitations under the set-aside program and the REAP (ACP) are applicable to a person. Programs administered by ASCS are applicable to farms as well as operators, owners, and producers. As a result, such terms need to be adequately and uniformly defined.
- 2 The term "person" is presently defined differently for purposes of the REAP payment limitation, the "set-aside" payment limitation and the constitution of farms. A uniform definition is needed which will adequately carry out the intent and purpose of each of these functions.

### B Proposed Definitions

- 1 Operator - The person who is in general control of the farming operations on the farm during the program year. This person must have managerial control of the farm in making the major decisions concerning the farming operations. There shall be only one operator per farm.
- 2 Owner - A person (or persons with undivided interest) who has legal ownership of a tract of land.
- 3 Grower - A person who shares in the production of agricultural commodities or proceeds therefrom and who is neither defined as an owner nor an operator.
- 4 Producer - A person defined as an operator, owner, or grower.
- 5 Person - Subject to additional provisions required by payment limitation regulations, the term "person" shall mean: An individual, partnership, association, corporation, estate, or trust, or other business enterprise, or other legal entity and whenever applicable, a state, a political subdivision of a state, or an agency thereof.

### C Explanation

- 1 The term "grower" is proposed because in a total integrated informational system it is highly desirable to have data on all producers who participate in farm income. There are a large number of producers who fall in this category and many are neither owners nor operators. Presently, several terms are being used to describe these individuals, e.g. sharecropper, field rented tract tenant, beekeeper, wool grower, etc. This term is not meant to include such persons as farm managers, other employees, custom operators, etc.
- 2 The recommended definition of a farm eliminates any reference to an operator. It is, therefore, not necessary to define a person (or operator) for the purpose of constituting a farm.
- 3 There are several different definitions of a "person", expressed

directly or by inference, that involve many different ASCS programs. It is recognized that a uniform definition for all programs would be desirable, but we have found it difficult to construct a uniform definition compatible to all programs and payment limitation provisions. Continued effort should be made to accomplish this.

- 4 Under the definition of the term "owner," the determination of "legal ownership" shall be in accordance with appropriate State laws.

## TRACT AND FARM NUMBERING SYSTEMS

### A Problem

Reconstitutions, changes in community boundaries, procedural requirements, etc., require frequent changes in farm numbers, and if applicable, tract numbers as well. Retention of farm and tract numbers is highly desirable. Also, a uniform numbering method is needed which will be compatible to all needs, including those of an automated data base which is responsive to all users.

### B Proposal

- 1 Tract numbering - Tracts within a county be numbered beginning with number "1" and continuing until all tracts are numbered. Numbers will not be duplicated within a county.
- 2 Farm numbering - A farm number shall be the same as the headquarter's tract number preceded by the letter "F". For example, if tract number 511 was considered the headquarter's tract for the farm, the farm number would be F511.

### C Explanation

- 1 This system eliminates the community prefix as a part of the tract or farm number. Since a community designator is primarily used for election purposes, its importance within a numbering system is slight. An automated producer data base can be built to link community designators with eligible voters in the producer data set and with tracts in the tract data set.
- 2 This proposal also provides that if community boundaries change, there would be no need to renumber tracts or farms because tracts and farms are not numbered by community.
- 3 The system for numbering farms by using a tract number eliminates the need for maintaining a separate series of farm numbers.
- 4 Many manual changes of numbers due to reconstitutions are eliminated because parent farm and tract numbers are retained to the extent possible.
- 5 State and county codes will always be used to identify out-of-county tracts.



## RECONSTITUTION OF FARMS AND TRACTS

### A Problem

- 1 Reconstitutions are presently a time consuming and often complicated process in county offices. Some counties with highly volatile farms keep a program assistant working full time on reconstitutions. Some farms are comprised of hundreds of tracts and the reconstitution process can be a slow, tedious exercise.
- 2 Current procedure provides five basic methods for farm and tract division. Often more than one method is needed in one reconstitution. Two different systems for retaining tract contribution data is prescribed. The situation is further complicated by the fact that a large part of the country does not have tract contribution data recorded in a usable form. As a result, a simplified, automated reconstitution process is very desirable.

### B Proposal

#### 1 Farm reconstitutions

- a Current allotments or bases will always be available in either preliminary or effective form for all commodities on all tracts. This will allow farm reconstitutions to be made by simply changing the tract alignment in the farm data set, and by updating other change of interest fields as they apply, such as producer and owner identification numbers, etc. Changes in basic information such as new owners, operators, and codes will be supplied at the time of the transaction, or made in a basic data update prior to the time of the reconstitution, by telecommunication network or scannable document.
- b During the establishment of tract data preparatory to loading the system, the present methods of reconstitution as provided in 3-PA shall continue to be applicable. In addition, an owner who has more than one tract within a farm shall be permitted to designate the allotments and bases attributed to each of his tracts after his share of the farm's allotments and bases has been established.
- c Farm reconstitutions made after the initial loading of the system will employ two methods of dividing tracts from farms, division by owner designation and division by the intrinsic tract method. The intrinsic tract method of reconstituting farms is a method whereby each tract retains unchanged all of its current and historical data. Reconstitutions by the intrinsic tract method are performed by re-aligning tract numbers in the farm data set. The designation by land-owner method will be subject to the same or similar qualifications that exist now in 3-PA except that designation by owner will be allowed whether or not there is a change of ownership. Owner designation will have priority over the intrinsic tract method.

- d Designated base and allotment acreage will be supplied to the system along with other basic data changes. When necessary, adjustments in tract program data such as yields will be made automatically by the system by using a simple yield/acreage proration subject to review and adjustment by the county committee.
- e Farm and tract numbers will change only when it is necessary. Retaining the parent farm and tract number whenever possible will minimize manual updating in the county office.
- f The system will provide for accepting reconstitutions at any time of the year. Effective dates will be carried for commodities which do not become effective at the same time as the initial reconstitution. The final stage of the reconstitution will be completed later by a time-initiated signal from the system.
- g Both historical tract data and data from prior farm reconstitutions will be retained in the system for a period of time determined necessary to meet program and administrative needs. Constitution dates will be maintained in the system to provide historical search capability.
- h When a farm reconstitution results in land being removed from agricultural production, sufficient additional data be inputted to provide non-agricultural land summaries by categories according to usage. Where non-farm associated land is cleared and devoted to agricultural production, sufficient additional data be inputted to provide a summary of the prior usage of such land by categories.

## 2 Tract reconstitutions

- a When tracts are combined or divided, the tract basic data such as cropland, tractland, bases, and allotments are combined or divided for all years carried in the tract data set. Current year data will contain the new allotment or base in either the preliminary or final form depending upon the date of the reconstitution. Yields and other program data that is not additive will be systematically blended or apportioned by an allotment/base acreage ratio subject to review and adjustment by the county committee.
- b There will be two methods of tract division, division by owner designation and division by cropland ratio. The cropland ratio method of division would be used when agreement cannot be obtained by the owners. The county committee (COC) will retain its authority to review and adjust the division of tracts.

## C Explanation

- 1 By automating basic farm and producer data into a centralized system, the manual operation on reconstitutions will be substantially reduced. The county office reconstitution task will be in coordinating, querying, securing proper authorizations for the proposed reconstitutions,

and in updating aerial photography. Once the reconstitution has been approved by the COC, a minimum of input data will be supplied, for example, new farm/tract alignments, new producer information, new aerial photography numbers, and designated bases and allotments if the ownership designation method is employed. The reconstitution will then be triggered. The processing of reconstitutions will be executed at electronic speeds and with electronic reliability.

- 2 The data base can be queried for prospective reconstitutions with new bases, allotments, yields, and other program data for the hypothetical farm alignments. This information can be obtained through a terminal while conversing with the producer and should be an exciting addition to the customer service environment.
- 3 Hardcopy of this data will also be used by the COC in determining eligibility of the reconstitution and in making judgements concerning the methods of division to be used. If the reconstitution is approved, the county office will then initiate the actual reconstitution. This will update the data base to reflect the new constitutions, notify all affected producers that the reconstitution has taken place, and produce revised allotment, base, and quota notices. Such matters as new producer cards and indexes, voter eligibility changes, allotment and base summaries, farm and tract numbering, and out-of-county transfers will be processed and controlled automatically by the system.
- 4 By structuring the data base by tracts instead of farms and by using the intrinsic tract method in processing reconstitutions, the reconstitution system can be straight forward and unencumbered from the complicated contribution methods of the present.
- 5 The number of methods for dividing tracts will be established at two. The number of farm division methods will be reduced from five to two. With emphasis placed on the owner designation method, the producer will have greater flexibility in the administration of his landholdings.
- 6 As land is added to, or removed from, agricultural production, management should have information regarding the nature of the change. This information could be helpful in planning future programs by providing a picture of the trend in land use. To provide this data, counties will notify the data base of the acreages which are reclassified from non-agricultural to agricultural as well as acreages of agricultural land being removed from productions.



## ESTABLISHMENT AND MAINTENANCE OF FARM AND PRODUCER DATA

### A Problem

1. Presently, farm and producer data is maintained in a decentralized system in county offices without real uniformity and in an ineffective mode for reporting to management. Current procedure for the establishment and maintenance of farm and producer data is not firm, and a variety of methods are being used throughout the country. With the use of optical scanning techniques, a portion of the basic data has been automated at the DPC's, but the overall system remains essentially a manual operation and one lacking integration or uniformity.
2. Management needs an automated, centralized and responsive system of farm and producer data if it is to effectively meet the requirements of the present world in the control and administration of farm-produced food and fiber and in the supervision of wise land conservation and environmental practices.

### B Proposal for farm and producer data

Farm and producer data will be stored in a centralized computer and in three files or "data sets" as follows: (1) Producer data set; (2) Tract data set and (3) Farm data set. The farm data set will be keyed by the farm number and at a minimum will contain associated tract numbers and the operator identification number. The tract data set will be keyed by the tract number and will contain tract information. The producer data set will be keyed by the producer identification number and will contain producer information. When farm data is required (such as farm allotment and base notices), it can be obtained by accumulating the farm's related tract data at electronic speeds. These data sets will contain the following:

1. Producer data set:
  - a. Name and address (including spouse when needed).
  - b. ID number including code for spouse who is a producer.
  - c. Producer type(s) (e.g., operator, owner, grower plus a code to denote the type of entity such as church, federal, government, hospital, etc.).
  - d. Birth year.
  - e. Code for male or female.
  - f. Racial code

- g Community election code(s).
  - h Referendum eligibility code(s).
  - i ASCS employment code, if applicable.
  - j Non-resident alien code.
  - k County and community of residency.
  - l Farm number(s).
  - m Tract number(s).
  - n Loan data.
  - o Payment data.
  - p Debt and assignment of payment records.
  - q Sugar and rice personal history data.
- 2 Tract data set:
- a Tract number.
  - b Photo number.
  - c Constitution date.
  - d Owner identifying number.
  - e Grower identifying number.
  - f Community code.
  - g Tractland and cropland.
  - h Allotment and base acreages by commodity.
  - i Yields by commodity.
  - j Land use acreages including crop acreages (planted and harvested), summer-fallow, grazing land, woodland, orchards, etc.
  - k Production by commodity.
  - l Congressional District code when county is intersected by the district line.
  - m REAP practices (number, units, year completed).

- n Commodity storage (capacity as well as quantity and quality in store by commodity).
  - o Livestock numbers.
- 3 Farm data set:
- a Farm number.
  - b Related tract numbers.
  - c Constitution date.
  - d Operator identifying number.
  - e Grower identifying number - if applicable.
  - f Compliance and participation data.

C Proposal for input of data

- 1 Data for the producer data set will be inputted initially on a document separate from the input of farm and tract data. This could be done prior to input of farm data by utilizing the present equipment and by replacing the name and address file at NODPC with the producer data set as outlined above. To update this file, a turn-around document initially prepared by NODPC with name, address and ID number will be used. This document then mailed to county offices to be completed and returned. The following data will need to be added:
- a Name of spouse, when needed for election purposes.
  - b Racial code.
  - c Community election code.
  - d Producer type(s) and birth year.
  - e ASCS employment code, if applicable.
  - f Residency.
  - g Non-resident alien code, if applicable.
  - h Code for spouse who is a producer.
  - i Code for male or female.

2 Data for the tract and farm data sets will be summarized on a form identical to the input document to reduce the chance for error when typing the scannable document during the initial input. Prior to preparing this work sheet, counties will establish a suitable record to account for all **agricultural land** physically located in the county. This data will be obtained and recorded by tracts. Items needed in preparation for initial input are:

- a Farm, tract and photo numbers.
- b Tractland and cropland.
- c Owner and operator identifying numbers.
- d Grower identifying number. if applicable.
- e Community code for each tract.
- f Allotments and bases.
- g Yields.
- h Commodity storage capacity, if available.
- i P&CP acreage, if needed (applicable only to farms failing to meet planting requirements).

D Proposal for land use report

1 Land use acreages. irrigated acreages, livestock numbers and commodity storage data will be obtained each year and inputted to the system during the period for certification of program compliance. Data on nonparticipating farms for which no certification is filed will be obtained by post card or county committee estimate. This data will then be available in the system for use in making land use projections during the development of future programs. If felt desirable, the following land classifications could be established from this data:

- a Tilled acreage.
- b Untilled acreage.
- c Nontillable acreage.
- d Timber acreage.
- e Public land acreage.
- f Farmstead acreage.

- 2 A report of production will be obtained after harvest each year by use of a post card or some other means whereby farmer visits to the county office will be minimized.

E Proposal for nonproducer data set

A nonproducer data set should be established to provide names and addresses of entities which are not producers. The following list of possible entities should be made available to those who will be responsible for establishing this data set:

- a Vendors.
- b Warehouses (UGSA approved).
- c Financial institutions.
- d Processors, buyers, dealers, shellers, etc., engaged in ASCS related functions.
- e Wholesale and retail establishments as needed by ASCS
- f Defense board members including other involved USDA personnel.
- g All ASCS offices.
- h Grower and trade associations.
- i Farm organizations.
- j Schools and other institutions.
- k Civic organizations.
- l Selected Federal, State, and county agencies.
- m Offices of Congress.
- n Public media as needed.
- o Public access or recreational areas.

F Explanation

- 1 A centralized farm and producer data base will be the information source for the total system to draw upon in automating practically all of ASCS program and administrative functions.

- 2 By obtaining annual or semi-annual production and inventory reports from all producers, the data base will be responsive to the informational needs of ASCS and many other potential users.
- 3 Centralizing farm and producer data as part of a total system will permit ASCS to obtain the type of statistical data and reports that it needs to administer, project, and develop ASCS programs.
- 4 A centralized farm and producer data base containing national acreage data on agricultural classes of land and land uses will be an invaluable source of information particularly in the area of production projection and control.
- 5 By housing farm and producer data in a responsive data bank, selective summarization and reporting can be provided for non-SCS agencies and bureaus as their needs may require. The centralized base can provide such agencies with more accurate data than they now possess as well as eliminating duplication in the overall administration of USDA.
- 6 A record of acreage available for cropland preservation and for allotment and base diversion credit will not be maintained in the system. Since such credit is not applicable to farms participating in the set aside program, history credit will be determined by the COC based on guidelines presently provided in 3-PA. as needed.
- 7 This task force is recommending that all agricultural land physically located in each county be accounted for in the tract data set. However, it may be desirable to obtain data, or even establish "non-agricultural tracts", to account for land devoted to cities, roads, cemeteries and other non-agricultural uses. The feasibility of obtaining this additional data will depend upon the results of a thorough cost/benefits study.

PREPARATION AND USE OF  
AERIAL PHOTOGRAPHY

A     Problem

Presently there are just about as many ways of numbering, delineating, and using aerial photographs as there are States. Uniformity and economy in the use of photography is vitally needed.

Current procurement practices and delineation procedures preclude a consistent program of recording vital data on Aerial Photography with appropriate materials.

B     Proposal

- 1 Every effort will be made to secure Aerial Photography coverage for all counties in the nation.
- 2 Aerial photography laboratories will trim, when necessary, and bind enlargements prior to sending them to county offices.
- 3 Present aerial photography enlargements in county offices will be converted to the alpha-numeric numbering system prescribed in Handbook 2-CP. Future aerial photography will be prenumbered by the aerial photography laboratories with a unique four-digit number. This numbering system will replace the alpha-numeric system as new photography is obtained.
- 4 DASCO will conduct an immediate study to determine optimum materials to be used for a uniform system of color delineation and annotation on Aerial Photography with consideration given to the reproduction of photo-copies. On the basis of this study laboratories will procure and furnish such materials to all counties.
- 5 Detailed instructions will be provided to State and county offices regarding photography operations. These instructions will prescribe a uniform method for annotating photography, provide adequate guidelines for several methods of delineating photography, and will instruct the counties in the maintenance and filing of photographs and photocopies. This procedure will further prescribe the use and maintenance of all equipment used on or for photography.
- 6 Each tract will be delineated in a specified color and annotated on photographs. Each field will be delineated in a second specified color and lettered or numbered in sequence within each tract. Field acreages will be entered within each field in tenths or hundredths. The colors used will be specified by the DASCO study (Item 4).
- 7 Farm numbers shall not be entered on photography.
- 8 National procedures will be amended to include a thorough explanation of the uses of cut-out photography. States and counties will be instructed to review this procedure carefully and determine which type

of photography will be more effective. Cut-outs may be used in counties that can justify the need with prior approval from a representative of the State committee.

- 9 Present photo-copy system to be continued.
- 10 Field: A field is defined as a part of a tract which is separated from the balance of the tract by permanent boundaries such as fences, roads, woodland, or other similar boundaries.

C Explanation

With preprinting of the photo numbers by the aerial photography laboratories on each enlargement and providing the materials for delineating all boundaries on photography, the counties will not have to number photos manually or worry about acquiring the right materials for delineations.

It is anticipated when aerial photo numbers are pre-printed by the laboratories, such numbers will remain relatively constant and will not change when new photography is received by county offices. This will preclude the many manual record changes of photograph numbers when counties receive new flights of photography.

Problem

- 1 Presently, address plates are prepared for each farm in a county and filed numerically by farm number. These farm plates are followed by a plate for each person who has an interest in the farm. In addition, more than one-half of the county offices maintain a plastic producer card for each producer in the county. These cards are filed alphabetically by last name and are used in an imprinter to prepare sight drafts. As a result, two or more plates are being maintained for every producer in the county. This is a duplication involving many hours of work keeping both files current.
- 2 The present format of the address plate provides, in addition to a tenancy code and a community code, for the inclusion of such data items as farmland, cropland, and photo numbers on the top section of the operator plate. These data items are constantly being changed because of reconstitutions, new photography, and other corrections. Such changes result in extra work in keeping the plates current.

B Proposal

- 1 As soon as operationally feasible, the data on the address plate be reduced to the following items:
  - a Name, address, and ZIP code.
  - b Producer ID number
  - c Farm number (operator plate only)
- 2 As soon as technologically possible, the address plate and the imprinter card be replaced by either a metal plate or plastic card which will work satisfactorily for heading up forms, addressing items for mailing and preparing sight drafts for scanning.
- 3 Establish a unique tabbing system to provide for selective use of the metal plate or plastic card for addressing mail, preparing listings, etc.

c Explanation

- 1 Some counties are presently using the address plate as a farm record for farms which do not have an allotment or base, because these farms do not have a related ASCS-156, Farm Record Card. It does not appear justifiable to require all counties to maintain basic data on the address plate when in most cases the data is duplicated on other records. By providing some other means of retaining farmland and cropland basic data (e.g. on a Farm Record Card) the function of the address plate will be to "head up" program forms and address mail. As the DPC becomes capable of addressing bulk mailings and "heading up" program forms for signups, the use of the address plate in this regard will be reduced to individual mailing or signup situations.

- 2 Present technology does not provide for a plastic card which will withstand the abuse of addressing machines and still retain its ability to provide a clear impression on sight drafts for scanning. However, this capability is being developed and ASCS should convert to the single plate or card concept as soon as possible. Many hours of work can be saved by using the address plate in the sight draft imprinter.

ESTABLISHMENT, USE, AND MAINTENANCE  
OF PRODUCER INDEXES

A Problem

- 1 Currently there is no formally prescribed method of maintaining an alphabetical producer index card or file. Nearly all counties need and use some type of ready reference producer index card file. Size, format, and informational content varies greatly between counties.
- 2 In order to keep producer index cards current, it is necessary to continuously update these records manually.
- 3 In an automated system there appears to be an even greater need for a fully usable cross-referenced Producer Index File. An updated index card could be prepared by the system, with uniform size, format, and informational contents.

B Proposal

- 1 Producer Index Record - One card will be computer-produced for each producer (operator, owner, grower) involved in farming operations in each county. (See attached examples.)
- 2 Each card will contain:
  - a Name and address (last name first)
  - b ID number
  - c Name of spouse (if needed)
  - d Voting community
  - e Tract numbers (all tracts within the county in which the producer has an interest as well as out-of-county tracts administered by the county. Owner, operator, and grower names to be shown for each tract.)
  - f Community location of tract
  - g Tractland acreage
  - h Farm numbers (All farms within the county in which the producer has an interest.)
  - i Photograph numbers (for each tract)

C Explanation

- 1 A standard Producer Index Card will not only furnish a ready cross reference in the county office to land and people records and data but an easily adaptable reference to data within the automated system.

- 2 Corrections or changes on index cards will be made manually by pen and ink. These changes will be reported currently to update the system.
- 3 New cards reflecting current data will be constantly available upon request by the county office.

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EXAMPLE 1 OPERATOR OF ONE FARM OWNER OF A TRACT WITHIN THE FARM AND OWNER OF A TRACT  
IN ANOTHER FARM

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SMITH JOE L ID 536 32 3428 7 VOTING COMMUNITIY  
SPOUSES NAME JEAN L A  
488 N SMOKEY FARM NO F233  
  
SUGAR HILL GA 97216

<u>TRACT NO</u>	<u>COMMUNITY LOCATION</u>	<u>TRACTLAND</u>	<u>FARM NO</u>	<u>OWNER</u>	<u>OPERATOR</u>	<u>GROWER</u>	<u>PHOTO</u>
223	A	150 AC.	F233	JOE L SMITH	JOE L SMITH	--	G47
238	B	200 AC.	F233	JANE DOE	JOE L SMITH	--	G47
129	C	160 AC.	F82	JOE L SMITH	J F SCOTT	--	F12

---

EXAMPLE 2 OWNER OF ONE TRACT HAVING INTEREST IN NO OTHER FARM

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DOE JANE ID 243 21 2810 8 VOTING COMMUNITY  
SPOUSES NAME JOE R B  
288 E SMACK  
BOOT HILL GA 97217

<u>TRACT NO</u>	<u>COMMUNITY LOCATION</u>	<u>TRACTLAND</u>	<u>FARM NO</u>	<u>OWNER</u>	<u>OPERATOR</u>	<u>GROWER</u>	<u>PHOTO</u>
238	B	200 AC.	F233	JANE DOE	JOE L SMITH	--	G47

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EXAMPLE 3 OPERATOR OF FARM AND OWNER OF ONE TRACT WITHIN THE FARM WITH A GROWER ON  
ONE TRACT

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SCOTT J F ID 283 12 1624 3 VOTING COMMUNITY  
SPOUSES NAME LINDA R D  
FARM NO F82  
1413 SMITH ROAD  
SANDY HILL GA 97218

<u>TRACT NO</u>	<u>COMMUNITY LOCATION</u>	<u>TRACTLAND</u>	<u>FARM NO</u>	<u>OWNER</u>	<u>OPERATOR</u>	<u>GROWER</u>	<u>PHOTO</u>
129	C	160 AC.	F82	JOE L SMITH	J F SCOTT	--	F12
82	D	640 AC.	F82	J F SCOTT	J F SCOTT	ED P JONES	F14

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EXAMPLE 4 GROWER ON A TRACT OWNED AND OPERATED BY ONE PERSON

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JONES ED P

ID 242 52 2110  
SPOUSES NAME JANE C

VOTING COMMUNITY  
D

1520 HAIL RD  
SANDY HILL GA 97218

COMMUNITY

<u>TRACT NO</u>	<u>LOCATION</u>	<u>TRACTLAND</u>	<u>FARM NO</u>	<u>OWNER</u>	<u>OPERATOR</u>	<u>GROWER</u>	<u>PHOTO</u>
82	D	640 AC	F82	J F SCOTT	J F SCOTT	ED P JONES	F14

## ESTABLISHMENT, USE, AND MAINTENANCE OF TRACT INDEX RECORD

### A Problem

As farm and producer data becomes automated to the extent that manual farm records will no longer be maintained in the county office, some means of obtaining farm and ownership data will be needed in the county office when only the tractor farm number is known.

### B Proposal

- 1 Tract index record - a card or printout record be computer-produced for each tract administratively located in each county.
- 2 This tract index record will contain as a minimum:
  - a Tract number
  - b Owner name

### C Explanation

A cross-reference record as proposed will provide counties with a complete tract number file in addition to providing the owner's name for each tract. After the owner's name is obtained, the producer index can be consulted to obtain the farm number, acreage, operator's name, etc.



## PART IV - AUTHENTICATION

### CONTROL OPPORTUNITIES

- A Since land and related data are broken down into their smallest practicable units, it is possible to assemble the units into whatever grouping is required. For example, current production adjustment programs are administered on a "farm" basis. The sugar programs have a different definition of a "farm". Still other definitions of a "farm" are employed by other agencies of government. The concept envisions that the system will be able, on demand, to assemble tract data to conform with any farm definition. Information will be easily controlled since it will be on-line and readily available. Changes can be implemented without delay.
- B Each tract number, when associated with the State and county code, will describe a unique parcel of land. Likewise, each farm can be uniquely described. These numbers become readily accessible "handles" for manipulating, summarizing, classifying, or otherwise, controlling parcels of land and related data in the system.
- C Because each parcel of land with its related data is a unique self-contained "building block", the parcels can easily be rearranged to represent a reconstituted farm configuration. This can be done on-line on a tentative basis for information purposes or it can be accomplished in fact upon county committee approval. Control is greatly improved since the results are known promptly rather than having to wait a considerable period for manual processing. While the system contains "intrinsic" allotment data and could be allowed to run on that basis alone, we strongly urge and provide that producer and county committee control options be retained.
- D Control is enhanced by employing limited classifications of kinds of "people" that are precise and descriptive. Less well defined is the definition of a "person". Payment limitations by "person" impose unique challenges to a system of control. We recommend that a single definition of a "person" for all limitation purposes be structured in a manner that is consistent with statutory requirements and, yet, lends itself to control within the system.



## OVERRIDE OPPORTUNITIES

- A Generally, all data elements introduced into the system at a county terminal can be corrected from that same terminal. The system is structured so that reconstitution of farms can be accomplished by the "intrinsic tract method" unless overridden because of the exercise of a county committee or producer option. In fact, tracts could be tagged to indicate those for which another method of division may be appropriate. For example, in a farm consisting of two or more tracts owned by the same person, a reconstitution involving the sale of one of these tracts would suggest that a division by "designation by landowner" might be applicable. Such tracts could be tagged so that this question is posed automatically wherever such tracts are involved in reconstitutions by division.
- B When an error is suspected or a producer complaint or inquiry is received, transactions can be reconstructed on-line so that the matter can be resolved promptly.

## QUALITY CONTROL

Quality control will be maintained in a number of ways:

- A Validity checks upon input.
- B Validity checks during processing.
- C Turn around documents back to county to verify initial loading of system.
- D Print-back or read-back verification of on-line data input.
- E At least initially, notices, drafts, etc. prepared by high-speed printer at central location will be sent to counties for review before mailing to producers.
- F Continuous balancing of critical data totals such as allotments, yields, dollars, etc.
- G Capability of monitoring subordinate office transactions.



## OTHER APPLICATION INTERFACES

- A A responsive and integrated system of information on land and people involves all aspects of ASCS. Accessibility, security and completeness of the data base require continuing interfaces with all applications in the entire system. Any deviation from the basic assumptions as stated earlier in this report will require additional study of its effects on the data base.
- B It is envisioned that the data base be so structured that data items may be added or subtracted from the sets without major revisions. This flexibility will require continuing cooperation among divisions and various task force areas.



## REQUIREMENTS OF OTHER ORGANIZATIONS

- A ASCS has a history of cooperating with other federal agencies. ASCS has provided printouts, data tapes, releases, and technical resources to other agencies. In turn ASCS uses other agency data and resources for determining policy and the administration of programs.
- B In the past two years ASCS has furnished SRS and ERS data tapes of various types for sampling or analysis purposes. IRS is furnished data on payments to individual producers. In addition, informal information requests have been fulfilled to various agencies at State, county, Washington, and commodity office levels.
- C The basic farm and producer data that will be placed in the centralized computer system will provide an opportunity to greatly expand and enhance these cooperative efforts. Presently, there is much duplication in the collection, storage, and analysis of information on individual farms.
- D This task force has contacted BIA, SRS, ERS, FS, BLM, Agriculture Division of Bureau of Census, and in conjunction with the Conservation task force, SCS and ES. FCIC and EMS have been contacted by other groups. Indian agencies and irrigation projects now gather land use and livestock numbers on an individual agency or project basis. Any help in this area would be appreciated by them. ERS would like information on specific Conservation Needs Inventory sample tracts in regard to land use, participation in programs and REAP practices. ERS also analyzes program impacts so statistical data including land use and livestock information by various economic size groups by program participation on all tracts would be useful. SRS and Bureau of Census need lists of crop and livestock items by size group and operator.
- E Forest Service and BLM can furnish basic grazing allotment data for establishing non-farm tracts on federally owned lands. Neither agency sees much need for ASCS data base information. IRS will continue to require payment data. Overall, the atmosphere seems to be one of restrained cooperation.
- F The envisioned data base covering all land area and both participating and non-participating farms by tracts would be very useful to the above agencies. With one exception, the data items in the tract and producer data sets when obtained on the above basis would fulfill most of the other agencies needs. The exception is the value of production by tract/farm or operator. At a minimum an indication of those greater than \$2500GVP (Gross Value of Production) could be indicated as requested by Bureau of Census and ERS. GVP can be generated from other data items in most cases. If this approach is used, county committees may be called upon to verify questionable cases.

- G Land use, livestock numbers, and production data items by tract need further specifications. In addition, policy development on update, access, and authorized use of data base information needs to consider the requirements of other agencies.
- H This task force recommends the ASCS data base serve as the government-wide source of farm and producer data. It is further recommended that USDA policy be such to encourage the data base use by all agencies. This use will reduce the reporting burden on individual producers.

## INFORMATION RETRIEVAL CAPABILITIES

It is not feasible to routinely retrieve or provide direct access to all information available within the system. However, timely access to special or unique combinations of data when needed is of invaluable assistance to the decision-making processes of both executive and operating management personnel.

Four data retrieval situations which would include such applications are:

- A Information stored or classified by keys. In addition to regular reports, information may be accessed by key on a demand basis and directly summarized by inputting desired keys. EXAMPLE: Corn production by SRS crop reporting district may be obtained by entering county codes for those counties within crop reporting districts.
- B Information classified by another data item. This information will be available on a demand basis as long as the data items are in the data base. EXAMPLE: Corn production by community. This information can be obtained but will require a search of all tracts within a county since neither corn production nor community code is a key.
- C Data containing keys from an off-line source. This data may be matched, collated, processed, or sorted with like items from the data base. EXAMPLE: A tape produced by SRS from area frame samples containing producer ID number may be checked against the ASCS producer data set for non-matches. A summary of these non-matches would give a measure of incompleteness of the data bank.
- D Historical data. When no longer useful, historical data will be moved off-line into library storage by off-line tapes or discs. This data could be used as an access by loading into a scratch area or processed sequentially.

Cooperation with other agencies can be enhanced by retrieval capabilities. The storage of basic data by tract greatly facilitates these possibilities.



## DECISION SIMULATION

- A All mathematical models require certain parameters as inputs. Items of basic data in the data base may be accessed to formulate these parameters. For example, age of producer, race of producer, type of producer (operator, owner, grower, church, corporation, etc.), size of farm, location of farm, commodities produced, etc.
- B Examples of Potential Simulation
  - 1 Management may want to predict how farm operators 50 years old and over would react to a decrease or an increase in the set-aside percentage for wheat.
  - 2 They also may want to predict how minority growers will be affected by lease and sale of allotments in selected States or counties.



## PART V - PLANNING CONSIDERATIONS

### ORGANIZATIONAL IMPACT

#### A Organization

- 1 It is anticipated that major changes will be made in the structure of ASCS at all levels. At the county office there will be a re-assignment of programs and duties. All personnel assignments will be reviewed with a re-evaluation of jobs, assignments, and qualifications of each employee. New jobs will be assigned commensurate with the workload and duties of the personnel.
- 2 The workload of the county office will reflect changes in scope as related to the new jobs assigned and programs to be administered. There will be a complete shift in many workload items to reflect the automation of a particular program. Much of the work will shift from desk work to work at the counter with the farmer, and work at the remote terminal helping the farmer with his individual sign-up requirements, farm management plans, and other related problems. Much more time will be spent gathering data for a total information system. Time presently spent by office personnel in making computations and related program reports, can be used more advantageously in other fields of endeavor.
- 3 Information presently housed in ASCS offices and information that could easily be secured from farmers on their regular visits to the county office, could be used by other agencies as well as ASCS. Much work would be involved in securing this information, thereby, shifting workload and personnel assignments. It is possible that some counties would need a program assistant, as they are now known, trained, and spending most of their time on the development and upkeep of all basic farm records.

#### B Staffing Requirements

- 1 It is possible that personnel staffing requirements would increase during the implementation of this totally responsive automated system.
- 2 At the county, State, DPC, and National levels, individual staffing patterns need to be established for:
  - a Developing procedures for the establishment and maintenance of land and people records.
  - b Providing liaison with county, State, DPC, and national management to insure that data is systematically obtained and properly disseminated.
  - c Coordinating proper and timely training at all levels in ASCS.
  - d Controlling and monitoring the demands for data from all levels within government.

## C Training

- 1 Training personnel in both the interim period and after the system is fully operational will be a tremendous job. With a total information system, training will be needed in the various phases of securing information and storing it in the system.
- 2 Consideration should be given to training on the State or area level where all personnel could receive training in the basic fundamentals of automation. This should include the use, operation, and maintenance of remote terminals.
- 3 Basic farm records are primarily related to land and people. This may require the research of wills, deeds, and other legal records. Training may be needed in this area. Consideration should be given to making available to County Executive Directors and other interested ASCS people, a short training course in commercial law.

## IMPLEMENTATION SCHEDULING

### A Producer Data Set

Presently producer information in county offices is limited to name, address, identifying number, voting community, and tenancy (i.e.: operator, owner, operator-owner). In addition, a name and address file by counties is maintained at New Orleans on magnetic tape.

The additional information as outlined in the producer data set could be accumulated and stored on magnetic tape until the full blown system is operational. As an aid in accumulating this additional data, the DPC should print out as soon as possible, a producer index card for each producer in the file. This card should be formatted similar to the examples in the producer index record section of this final report. Counties may use this card to record the needed producer data until it is automated. As soon as counties have obtained the necessary data, a scannable, turn around document should be issued from DPC on which this data could be entered and mailed from county offices. Hopefully, the producer data set will be established and purified prior to establishing the farm and tract data sets so county offices can devote sufficient resources to obtaining and submitting land information when the system is ready.

### B Farm and Tract Data Sets

The extra work associated with generating the data for the tract data set will have a major impact on county offices. It is, therefore, paramount that counties receive detailed instructions in this regard at the earliest possible date to enable them to approach the job systematically and with the least disruption of normal operations. Following is a partial list of tasks to be completed in obtaining this data:

- 1 Renumber aerial photography (applicable in counties not presently using the alpha-numeric system)
- 2 Delineate all tracts on photograph
- 3 Number all tracts
- 4 Designate headquarters tract to determine farm numbers
- 5 Establish tractland and cropland for all tracts
- 6 Determine current owners for all tracts

7 Establish necessary control records for cross-reference between tracts, farms, and producers

8 Determine allotments, bases, and yields for each tract

Plans for conducting periodic checks to see that satisfactory progress is being made should be developed by each State office. Such supervision is needed to assure that all counties are ready when the time for making the initial input to the system arrives.

When the time to automate this data arrives, counties should have the information readily available for typing on a scannable document with the least amount of wasted motion and a minimum amount of error. It seems desirable that a form similar in format to the scannable input document should be provided as a source from which this information will be typed. Prior to completing this form, counties should be provided an adequate farm or tract record document to serve as both a place to store farm and tract data and as an operating record to be used for program purposes until all records are satisfactorily automated. Substantial pre-planning in this area is necessary to provide adequate "lead time" and also assure that revisions in the initial instructions will not be made causing loss of time and inefficient use of manpower.

#### C Timing of Initial Input of Farm and Tract Data

There are many benefits to be derived from establishing farm and producer data in an integrated computer system. One of these benefits is the ability to establish allotments and bases with electronic speed and reliability. This process poses somewhat of an implementation problem to the extent that the initial input should be made prior to the period for establishing the succeeding years allotments and bases. If this is not done, county offices will need to manually compute allotments and bases in order to meet schedules and deadlines for issuing notices. Should this happen, another input of basic data would be necessary to update the tract data set.

To minimize this problem, most counties, especially in the predominately wheat and feed grain areas, should input data during the months of July through December. However, it may be advantageous for some counties, especially in the cotton and tobacco areas, to input data at other times of the year.

#### D Obtaining annual report of Acreages, Production, Livestock, etc.

As provided in this task force's proposal for a land use report, data with respect to planted crops, harvested crops, production, livestock,

etc. will be obtained annually and stored in the tract or farm data set. As the system becomes functional and responsive, a sincere effort should be made to obtain a total land use report to account for all agricultural acreage in the tract data set. In the interim, counties should be encouraged to obtain planted acreages to the extent possible while also convincing the farmer that an accurate report will ultimately be beneficial to the farm community. Good public relations and a continued atmosphere of farmer confidence is absolutely essential to a program of this nature.

It is the recommendation of this task force that data on livestock not be obtained until the system is fully automated, other statistical data programs are satisfactorily operational, and the farmer has been properly convinced of the need for good, factual data provided on a voluntary basis.



## APPLICATION CONVERSION

- A County offices must continue to administer farm programs as authorized by Congress. Therefore, it is imperative that the preparation for and the actual implementation of the automated data base not disrupt these essential operations. This may require additional staffing. It quite definitely calls for ample "lead time" to obtain the needed data.
- B It should also be recognized that manual farm and producer records must be maintained in county offices until county and State people have complete confidence in the automated system. This may require a duplication of record keeping until such confidence is generated. Complete automation of county office records should not be attempted unless service to the farmer as presently recognized can either be maintained or improved upon.



## PART VI OTHER CONSIDERATIONS

### A HANDBOOK PROCEDURE

Currently there are no instructions adequately relating to the establishment and maintenance of basic farm and producer data in county offices. Although several program oriented handbooks make an effort to provide some guidelines toward farm and producer records, they fall far short of providing sufficient instructions. Often these same handbooks conflict in interpretation or guidance.

Management, especially at the county level, needs well written procedure thoroughly covering all phases of basic farm and producer records. These instructions are needed now. There will be an even greater need during the conversion period and later during automation.

It is recommended a "Basic Farm and Producer Record" handbook be established without delay. This handbook will cover all operations needed to establish and maintain farm and producer records. It will be independent of all program handbooks, but all program handbooks will be dependent upon this handbook for reference to land and people data.

### B FILE SECURITY

The security control of data bank operations appears to be a matter of increasing concern to various governmental groups and private individuals as well as corporate entities and computer manufacturers. Recent congressional interest indicates a potential for legislative action in the near future. (Ervin hearings in the Senate; HR 4375; Senate Bill 975; etc.)

Although not within the purview of this task force, we strongly recommend that a thorough plan for all aspects of file security must be developed and placed in operation upon the implementation of the ASCS EDP system.

### C IMPRINTERS

Due to a decrease in the preparation of sight drafts in county offices, there is some question whether the benefits justify the continuance of producing plastic imprinter cards by the DPC. Presently imprinters are used by counties to prepare REAP and loan drafts which amounts to a very small volume compared to the time it takes to prepare, file, and update the plastic imprinter cards.

It is recommended that the use of the imprinter and cards be re-evaluated as soon as possible. Should the use of the imprinters be found

worthwhile, relocate the imprinters to counties having sufficient volume of REAP payments and loans to substantiate their use. Also the optional use of the imprinter in county offices should be authorized so that new producer cards will not be sent to counties which have little or no use for them.

#### D SIGNATURE AUTHORIZATIONS

Generally the only acceptable form prescribed for use in county offices for persons signing in a representative capacity, is form ASCS-211 "Power of Attorney". It appears a simpler method to authorize persons to sign in a representative capacity should be developed.

It is recommended a simple signature authorization card be developed and approved for use on an optional basis with ASCS-211 in county offices. The design could be similar to signature authorization cards used at banks, or a cut-down version of the power of attorney.

The use of card stock in preference to the large power of attorney, will allow for greater ease in filing and quicker reference.







